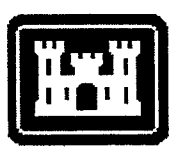
Appendix 1A
Environmental Assessment/Initial Study

Final
Environmental Assessment/Initial Study

August 2001

American River Watershed, California
Folsom Dam Modification Project

The Reclamation Board
State of California



US Army Corps of Engineers®
Sacramento District

DEPARTMENT OF THE ARMY
U.S. ARMY ENGINEER DISTRICT, SACRAMENTO
CORPS OF ENGINEERS
1325 J STREET
SACRAMENTO, CALIFORNIA 95814-2922

REPLY TO
ATTENTION OF

Environmental Resources Branch

FINDING OF NO SIGNIFICANT IMPACT

AMERICAN RIVER WATERSHED, CALIFORNIA
FOLSOM DAM MODIFICATION PROJECT

1. I have reviewed and evaluated information presented in this environmental assessment (EA) prepared for the proposed modifications to Folsom Dam. I have considered the views of other interested agencies, organizations, and individuals concerning the proposed action.

2. The possible consequences of conducting the work described in the EA have been studied with consideration given to environmental, socioeconomic, cultural, and engineering feasibility. The environmental impacts have been coordinated with the U.S. Fish and Wildlife Service, National Marine Fisheries Service, the California Department of Fish and Game, the Reclamation Board of the State of California, and the City of Folsom.

3. No significant impacts to vegetation and wildlife, or recreation resources would result from the proposed action. A review of potential impacts to cultural resources, including an eligibility determination of Folsom Dam, has been completed. We have concluded that Folsom Dam is not eligible for listing under the National Register of Historic Places. The State Historic Preservation Officer agrees with our conclusion. Potentially significant impacts and issues of concern related to fisheries, transportation and traffic safety, air quality, and water quality were identified. These impacts are discussed below along with the mitigation measures I have determined to adopt in order to ensure that these impacts are less than significant.

a. Fisheries. Concerns were raised that increased flows in the lower American River under the Proposed Action may damage existing spawning beds through localized scour.

- Mitigation: Outflows from Folsom Dam above 25,000 cubic feet per second (cfs) will be limited to 60 percent of the forecasted inflow. Maximum flood releases would be made once the actual or forecast inflow exceeds 150,000 cfs. With this rule restriction, Folsom outflow would remain at or below historic levels for the range of flows between the 2.5- and 10-year flood event without restricting outflows during larger floods. The potential for spawning gravel impacts due to outlet modifications would thus be avoided.

b. Transportation. Significant impacts as a result of closing Folsom Dam Road were not identified. However, the Lead Agencies and the City of Folsom Public Works Department have discussed several options for minimizing the impacts of the project on traffic congestion in old town Folsom. As a result of these discussions, the Corps will work with the U.S. Bureau of Reclamation to improve the communication program designed to inform motorists about road closures, including participating in the installation of temporary changeable message signs. In addition, weekend closures of Folsom Dam Road will be scheduled to occur outside of the primary recreation season at Folsom Lake to the extent possible.

c. Traffic Safety. The potential for vehicle conflicts at the construction access road south of Folsom Dam also exists. The following mitigation measure will be implemented to minimize the potential for vehicle conflicts at the construction access road south of Folsom Dam.

- Mitigation: A temporary signal will be provided at the intersection of Folsom Dam Road and the access road on the south side of the dam. The signal would allow construction vehicles to make left turns safely onto Folsom Dam Road. The temporary signal would be designed so that it would be actuated when a vehicle using the access road was ready to make a left turn onto Folsom Dam Road. In planning for the temporary signal, a review of the design features of the intersection and the roadway approaches will be performed to determine the proper placement of the signal. In addition, efforts will be made to separate construction traffic from through traffic by installing a temporary left-turn lane or using a portion of the overlook parking area to assist in turning movements onto the south access road.

d. Air Quality. Significant air quality impacts have not been identified, but impacts are of concern because the project area is classified as a nonattainment area for ozone and PM_{10}. Best Management Practices (BMP's) will be implemented for ozone and PM_{10} to help protect ambient air quality conditions. The BMP's recommended for this project are as follows:

- The contractor will perform routine tuning and maintenance of construction equipment to ensure that the equipment is in proper running order.

- The contractor will monitor dust conditions along access roads and within the construction area to ensure that the generation of fugitive dust is minimized. Specific measures include the periodic application of water to disturbed areas, at least two times per day during hot weather and suspension of soil-disturbing activities during periods with winds over 25 miles per hour.

e. Water Quality. A potentially significant effect would be the construction-related degradation of water quality from outlet modification. Best management practices will be instituted, and a monitoring program and weekly reports will be prepared to ensure that water quality requirements are met. The following BMP's will be implemented:

- The Lead Agencies will consult with the U.S. Bureau of Reclamation to ensure that dredging activities on the upstream face of Folsom Dam occur during periods of low outflow (both through the river outlets and through the penstocks) and that the penstock shutters are configured in a manner that minimizes the entrainment of suspended sediment.

- Appropriate controls will be used during dredging to reduce sediment resuspension and limit the potential for resuspended sediments to be transported to areas outside of the localized construction area or to be discharged into the river downstream of Folsom Dam. Control measures may include suction dredging or the use of environmentally friendly clamshell dredge technology.

- Monitoring of downstream water quality will be required during sediment dredging, both downstream of Folsom Dam and in the vicinity of the penstocks and urban water intake. Turbidity, an indicator of the concentration of suspended sediment in the water column, will be monitored in accordance with the water quality objectives of the Water Quality Control Plan for the Sacramento River and San Joaquin River Basins. Exceedance of the water quality objectives will require additional sediment controls as determined by the Corps and Reclamation Board in consultation with the Regional Water Quality Control Board, U.S. Bureau of Reclamation, Western Area Power Administration, San Juan Water District, City of Folsom, and the City of Roseville.

- The use of water in construction will be limited to the quantities necessary to give sufficient dust and wind erosion control. Construction water that runs off the work site will be prohibited.

- Sediment control methods will be used in the interior of the dam to limit the discharge of construction materials into the interior drainage system of the dam. Best management practices could include the use of silt fences or other barriers at drainage inlets.

- Equipment storage, cleaning, fueling, and maintenance areas will be located and maintained in a manner to prevent any contaminants from adversely affecting the quality of storm water runoff.

  - Absorbent pads will be placed to catch all leaks from equipment parked overnight.
  - Major equipment cleaning and maintenance will not be conducted within the construction area at the face of the dam or near the stilling basin.
  - All stationary fuel tanks will be surrounded by a protective berm of sufficient size to contain any spill from the tank.
  - All spills will be cleaned up immediately as set forth in the environmental plan in the construction specifications.

- Construction equipment will be stored in areas outside the natural surface drainage patterns and away from areas where stormwater could pool and percolate to ground water.

4. Based on my review, I have determined that the proposed modifications to Folsom Dam would have no significant impacts on the environmental and cultural resources and that the mitigation measures are sufficient to reduce any potential impacts to fisheries, transportation and safety, air quality, and water quality to less than significant.

5. Based on these considerations, I am convinced that there is no need to prepare a supplemental environmental impact statement. Therefore, an EA and finding of no significant impact provide adequate environmental documentation for the proposed action.

16 Aug 01
Date

Michael J. Conrad, Jr.
Colonel, Corps of Engineers
District Engineer

MITIGATED NEGATIVE DECLARATION FOR THE AMERICAN RIVER WATERSHED, CALIFORNIA, FOLSOM DAM MODIFICATIONS PROJECT

The Reclamation Board of the State of California is acting as lead agency under the California Environmental Quality Act for the American River Watershed, California, Folsom Dam Modifications Project. The Reclamation Board and the U.S. Army Corps of Engineers, which is the federal sponsor, have jointly prepared an Environmental Assessment/Initial Study for this project. This Negative Declaration has been prepared pursuant to the State CEQA Guidelines, and the Corps proposes to issue a Finding of No Significant Impact in accordance with the National Environmental Policy Act.

PROJECT LOCATION

Folsom Dam is located about 25 miles east of the City of Sacramento and downstream of the confluence of the north and south forks of the American River in Sacramento County, California. The project area consists of Folsom Dam and Reservoir and the lower American River, which includes the American River Parkway and the floodplain of the lower American River from Folsom Dam downstream to the confluence with the Sacramento River.

PROJECT DESCRIPTION

This Environmental Assessment/Initial Study describes the proposed modifications to Folsom Dam and modification of the use of surcharge storage at Folsom Dam, in Folsom, California and supplements information presented in the March 1996 Supplemental Information Report and Supplemental Environmental Impact Study/Environmental Impact Report. This EA/IS is specific to the work needed to modify the outlets at Folsom Dam and the work needed to modify the use of surcharge storage at Folsom Dam. Project construction is expected to take approximately five and one half years and work is scheduled to begin in 2001.

Outlet modification would consist of enlarging the existing outlets by controlled blasting. Watertight bulkheads would be placed over the inlets to allow excavation in the dry. Excess concrete would be hauled away from the dam site and disposed of in a permitted area. Haul routes to and from the dam site are on existing access roads. Staging areas are located at existing parking lots or equipment yards.

In order to modify the use of surcharge storage: (1) the three emergency spillway gates would be replaced with Tainter gates, (2) the hydraulic power units for the penstock gate hoists would be relocated, (3) the impervious core in Mormon Island Dam and in dikes nos. 5 and 7 would be raised, and (4) the Newcastle Powerhouse would be flood proofed. In addition, the emergency spillway release diagram would be revised.

POTENTIAL IMPACTS TO THE ENVIRONMENT AND MITIGATION MEASURES

No significant effects to vegetation and wildlife or recreational resources will result from this project. No agricultural lands are within or adjacent to the project area. No known hazardous, toxic and/or radiological waste have been identified in the Project area. An analysis of possible impacts to existing cultural resources was made. The Dam is not eligible for listing to the National Register of Historic Places and a letter from the State Historic Preservation Officer has concurred with this finding. Potentially significant effects to fisheries, transportation, water quality, and air quality were identified. Impacts to transportation and air quality were studied and found to be less than significant, however, in response to public comments some additional mitigation measures have been proposed. These effects and those relating to fisheries and water quality are listed below along with the mitigation measures that will be adopted to reduce these effects to less-than-significant.

Fisheries. A potential impact from the proposed project is that increased flows in the lower American River may damage existing spawning beds through localized scour. With the implementation of the mitigation measure below, the impacts to fisheries would be less than significant.

- Mitigation: Outflows from Folsom Dam above 25,000 cubic feet per second will be limited to 60 percent of the forecasted inflow. Maximum flood releases would be made once the actual or forecast inflow exceeds 150,000 cfs. With this rule restriction, Folsom outflow would remain at or below historic levels for the range of flows between the 2.5- and 10-year flood events without restricting outflows during larger floods. The potential for spawning gravel impacts due to the outlet modifications would thus be avoided.

Transportation. Increased traffic congestion and commuter safety were identified as potential impacts of the project due to closing Folsom Dam Road during the midweek/midday period. Impacts to transportation were studied and found to be less than significant. However, in response to public comments some additional mitigation measures have been proposed.

- Mitigation: Folsom Dam Road Closure. Significant impacts as a result of closing Folsom Dam Road were not identified. However, the lead agencies and the City of Folsom Public Works Department have discussed several options for minimizing the effects of the project on traffic congestion in old town Folsom. As a result of these discussions, the lead agencies commit to participating in the improvement of the Bureau of Reclamation's communications program designed to inform motorists about road closures, including participating in the installation of temporary changeable message signs. In addition, weekend closures of Folsom Dam Road will be scheduled to occur outside of the primary recreation season at Folsom Lake to the extent possible.

- Mitigation: Safety. The following mitigation measure shall be implemented to minimize the potential for vehicle conflicts at the construction access road south of Folsom Dam. A temporary signal shall be provided at the intersection of Folsom Dam Road and the access road on the south side of the dam. The signal would allow construction vehicles to make left turns safely onto Folsom Dam Road. The temporary signal would be designed so that it would be actuated when a vehicle using the access road was ready to make a left turn onto Folsom Dam Road. In planning for the temporary signal, a review of the design features of the intersection and the roadway approaches should be performed to determine the proper placement of the signal. In addition, efforts shall be made to separate construction traffic from through traffic by installing a temporary left-turn lane or using a portion of the overlook parking area to assist in turning movements onto the south access road.

Implementation of this mitigation measure would reduce the impact to a less-than-significant level.

Air Quality. Significant air quality impacts have not been identified, but mitigation has been proposed based on public comments and because the project area is classified as a nonattainment area for ozone and PM_{10}. Best Management Practices have been recommended and will be implemented for ozone and PM_{10} to help protect ambient air quality conditions. BMPs recommended for this project are as follows.

- The contractor shall perform routine tuning and maintenance of construction equipment to ensure that the equipment is in proper running order.

- The contractor shall monitor dust conditions along access roads and within the construction area to ensure that the generation of fugitive dust is minimized. Specific action measures include (1) periodic application of water to disturbed areas, at least two times per day during hot weather, and (2) suspension of soil-disturbing activities during periods with winds over 25 mph.

Water Quality. A potential significant effect would be the construction-related contamination from outlet modification.

- Mitigation: The following best management practices would be implemented:

The lead agencies will consult with the Bureau to ensure that dredging activities on the upstream face of Folsom Dam occur during periods of low outflow (both through the river outlets and through the penstocks), and that the penstock shutters are configured in a manner that minimizes the entrainment of suspended sediment.

Appropriate controls shall be used during dredging to reduce sediment resuspension and limit the potential for resuspended sediments to be transported to areas outside of the localized construction area or to be discharged into the river

downstream of Folsom Dam. Control measures may include suction dredging or the use of environmentally friendly clamshell dredge technology.

Monitoring of downstream water quality shall be required during sediment dredging. Turbidity, an indicator of the concentration of suspended sediment in the water column, shall be monitored in accordance with the water quality objectives of the Water Quality Control Plan for the Sacramento River and San Joaquin River Basins. Exceeding the water quality objectives will require additional sediment controls as determined by the lead agencies in consultation with the Bureau.

The use of water in construction shall be limited to the quantities necessary to give sufficient dust and wind erosion control. Construction water that runs off the work site shall be prohibited.

Sediment control methods shall be used in the interior of the dam to limit the discharge of construction materials into the interior drainage system. Best management practices could include the use of silt fences or other barriers at drainage outlets.

Equipment storage, cleaning, fueling, and maintenance areas shall be located and maintained in a manner to prevent any contaminants from adversely affecting the quality of storm water runoff. Absorbent pads shall be placed to catch all leaks from equipment parked overnight. Major equipment cleaning and maintenance shall not be conducted within the construction area at the face of the dam or near the stilling basin. All stationary fuel tanks shall be surrounded by a protective berm of sufficient size to contain any spill from the tank. All spills shall be cleaned up immediately.

Construction equipment shall be stored in areas outside the natural surface drainage patterns and away from areas where storm water could pool and percolate to ground water.

FINDINGS

The Reclamation Board has determined that the proposed project modifications and mitigation plan will not:

(a) substantially degrade the quality of the environment; substantially reduce the habitat of a fish or other wildlife species; cause a fish or wildlife population to drop below self-sustaining levels; threaten to eliminate a plant or animal community; reduce the number or restrict the range of an endangered, rare, or threatened species; or eliminate important examples of the major periods of California history or prehistory;

(b) achieve short-term environmental goals to the disadvantage of long-term environmental goals;

(c) cause environmental effects that are individually limited but cumulatively considerable;

(d) cause substantial adverse effects on human beings, either directly or indirectly.

The EA/IS has identified potentially significant effects to fisheries, transportation, air quality, and water quality. Mitigation measures have been adopted to reduce these potential effects to less-than-significant. Therefore, a "Finding of No Significant Impact" and a Mitigated Negative Declaration have been prepared to accompany this EA/IS.

ADMINISTRATIVE RECORD

The administrative record for this project is available for public review at The Reclamation Board, 1416 Ninth Street, Room 1601, Sacramento, CA 95814 (916) 653-5434.

APPROVED:

Peter D. Rabbon
General Manager

Date July 20, 2001

FINAL
ENVIRONMENTAL ASSESSMENT/INITIAL STUDY

AMERICAN RIVER WATERSHED, CALIFORNIA
FOLSOM DAM MODIFICATION PROJECT

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